

WHAT IS CLAIMED IS:

1. An isolated DNA molecule selected from one of the formulae (Va)-(Vh), wherein  
X<sup>1</sup> and X<sup>2</sup> are each, independently, hydrogen or 1-20 additional nucleotides,

X<sup>1</sup>AATATGAAAAAAGCX<sup>2</sup> (Va),  
X<sup>1</sup>GCTTCGGTCGCGTAX<sup>2</sup> (Vb),  
X<sup>1</sup>ACAGCTGGGATTGCX<sup>2</sup> (Vc),  
X<sup>1</sup>ACTGCTAACACAGCTX<sup>2</sup> (Vd),  
X<sup>1</sup>TAACAGCAATTCAAGX<sup>2</sup> (Ve),  
X<sup>1</sup>CTGAGGTAGCGAGCX<sup>2</sup> (Vf),  
X<sup>1</sup>AGCACTCCAGTTGTTAX<sup>2</sup> (Vg), or  
X<sup>1</sup>GCAGTTTCTAAACCTX<sup>2</sup> (Vh),

or a DNA molecule complementary to said sequence of formulae (Va)-(Vh), wherein said sequence is useful as a primer for amplifying an *iap* (invasion-associated protein) gene.

2. An isolated DNA molecule of claim 1, selected from

ATGAATATGAAAAAAGCAAC (IIa),  
TTGGCTTCGGTCGCGTATAA (IIb),  
GCTACAGCTGGGATTGCGGT (IIc),  
CAAACCTGCTAACACAGCTACT (IId),  
CAATAACAGCAATTCAAGTGC (IIe),  
TAACTGAGGTAGCGAGCGAA (IIIf),  
ACTAGCACTCCAGTTGTTAAAC (IIg), or  
CCAGCAGTTTCTAAACCTGCT (IIh),

or a DNA molecule complementary to said sequence of formulae (IIa)-(IIh).

00372036.004400

3. An isolated peptide selected from the formulae (IVa)-(IVi)

$X^3\text{ProValAlaProThrGln}X^4$	(IVa)
$X^3\text{ThrGlnAlaThrThrProAla}X^4$	(IVb)
$X^3\text{AlaIleLysGlnThrAlaAsnThrAla}X^4$	(IVc)
$X^3\text{GlnGlnThrAlaProLysAlaProThr}X^4$	(IVd)
$X^3\text{ValAsnAsnGluValAlaAlaAlaGluLysThrGlu}X^4$	(IVe)
$X^3\text{ThrProValValLysGlnGluValLys}X^4$	(IVf)
$X^3\text{ValLysGlnProThrThrGlnGlnThrAlaPro}X^4$	(IVg)
$X^3\text{IleLysGlnProThrLysThrValAlaPro}X^4$	(IVh)
$X^3\text{GlnGlnThrThrThrLysAlaProThr}X^4$	(IVi)

wherein

$X^3$  and  $X^4$  are each, independently, hydrogen or 1-7 additional amino acids.

4. An isolated peptide of claim 3, wherein said peptide is useful as an epitope for preparing or specifically binding to an antibody to p60 protein.

5. A peptide of claim 3, selected from the sequences of Figures 2a-i.

6. A peptide of claim 3, selected from the sequences of Figures 5a-d.

7. A method of preparing an immunogenic conjugate, wherein one portion of the conjugate comprises a peptide of claim 3.

8. A process for preparing an antibody capable of specifically binding the p60 protein from listerias, comprising

immunizing an experimental animal with an immunogen, wherein said immunogen is a polypeptide of Figure 3 or an immunogenic conjugate which comprises a peptide having a sequence selected from the polypeptide sequence of Figure 3, and isolating the thus-produced antibody.

9. A process of claim 8, wherein the immunogenic conjugate comprises a 7-24 amino acid peptide having a sequence selected from the polypeptide sequence according to Figure 3.

10. A process of claim 8, wherein the immunogenic conjugate comprises a peptide according to one of the formulae (IVa)-(IVi) of Figure 3.

11. A method of detecting the presence of a bacteria of the genus *Listeria* in a sample, comprising hybridizing DNA from the sample with a DNA molecule of claim 1.

12. A method of detecting the presence of a bacteria of the genus *Listeria* in a sample by means of gene amplification, wherein a primer of claim 1 is used.

13. A test kit for detecting bacteria of the genus *Listeria* by means of a polymerase chain reaction assay comprising, as a DNA primer, a DNA molecule of claim 1.

14. A test kit of claim 13 for detecting bacteria of the species *Listeria monocytogenes*.

09372036 031199  
661150 3E02E60

15. An isolated antibody which specifically binds to the p60 protein from pathogenic listerias, wherein said antibody binds an epitope from the sequence of the polypeptide of Figure 3.

16. An antibody of claim 15, wherein said antibody binds an epitope comprising a sequence of Figures 2a-i.

17. An isolated antibody which can be prepared by immunizing an experimental animal with a polypeptide according to Figure 3, or with an immunogenic conjugate which conjugate comprises a 7-24 amino acid peptide having a sequence selected from the polypeptide sequence of Figure 3, wherein said antibody specifically binds to the p60 protein from pathogenic listerias.

18. An isolated antibody which specifically binds a p60 protein from listerias, wherein said antibody binds an epitope which comprises a sequence of Figures 5a-d.

19. An antibody which can be prepared by immunizing an experimental animal with an immunogenic conjugate, wherein the conjugate comprises a peptide of Figures 5a-d.

20. A method of detecting bacteria of the genus *Listeria* in a sample, comprising binding a p60 protein with an antibody of claim 15.

21. A method of detecting bacteria of the genus *Listeria* in a sample by means of an immune reaction, wherein an antibody of claims 15 is used.

22. A test kit for detecting bacteria of the species *Listeria monocytogenes* by immunoassay, comprising an antibody of claim 15.

23. A test kit for detecting bacteria of the species *Listeria innocua* by immunoassay, wherein it contains an antibody of claim 18.

SECRET

add  
B' 2 15